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**State of Vermont**  
**Vermont Department of Education**  
120 State Street  
Montpelier, VT 05620-2501

## **MEMORANDUM**

**To: Superintendents**  
**From: Armando Vilaseca, Commissioner**  
**Re: Broadband Technology Opportunities Program**  
**Date: February 24, 2010**

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In the Spring of 2009, I wrote to you concerning broadband access and asked you to submit a letter committing your support to work with the Vermont Telecommunications Authority (VTA) and other state agencies on a coordinated request for stimulus funding to extend broadband to all communities in the state. That commitment letter was crucial in our work with VTA in signaling that schools in Vermont were on board with efforts to bring broadband access to them. Through that letter, we will soon be able to choose a portion of those represented for the first phase of the network that should be in place by the end of 2010.

The partners involved in the VTA application to the stimulus monies grant (Broadband or Technology Opportunities Program), represented by K-12 schools, the Department of Education, Vermont State and Community Colleges, the Department of Libraries as well as the Public Service Board, are now preparing the application (due mid-March) to secure \$20-50 million for Vermont to help offset last-mile connections to a robust fiber network around the state.

Working on this application with a hired grant writing entity, this consortium has been in regular meetings to discern the best approach. One of the crucial elements of the application is that the community anchor institutions must provide some level of detail that outline the need for this increased broadband access. Therefore, we again ask you for a letter of support that can be attached to this application and that you indicate specific examples of your strong need for increased broadband access to the schools in your supervisory union.

Included with this memo is a draft letter for you to use with a section for you to edit. What we seek from you is details about your current access level and examples of how this level of access is inadequate as you continue to add infrastructure, additional workstations, and robust applications to the teaching and learning in your supervisory union. You may want to involve your Technology Coordinator/Director/Integration Specialist or your Internet Service Provider to get these answers. A mock-up example has been provided. Please use this as a guide when putting together your compelling story.

Christopher Hastings, consultant from Powerhouse Consultants, has been retained through a Title IID grant to assist the Vermont Department of Education in these efforts. Chris has been instrumental in his work and outreach to schools around many aspects of this work. He is available to assist with the crafting of your letter to help us reach the goal of as many letters as possible in support of this application process. Peter Drescher, at the Department of Education can also be reached to address questions you may have as well.

Some points to think about when working with this document:

- Empirical data is the goal, e.g., “We currently run 250 computers throughout the day that serve a population of 400 students. Half of the machines struggle at some point in the school day due to a “bottle-necking” of our current broadband capacity. Often our connection must be re-set when too many users are accessing.”
- Please provide through-put numbers when possible, e.g., “Our download speed is currently 6mgb, but that number is generally compromised by 50%.”
- Be sure to provide your future plans, such as student data systems you intend to be part of and how that may be impacted. Include Web-based software packages you intend to purchase to meet the goals of identified school programs, special needs populations, after-school programs, etc.
- Avoid discussions about gaming programs, for example some schools have after-school programs where computer games are used. That is fine, there is much positive research on this kind of gaming, but we want to focus on crucial core content needs.
- Include what access parents have to your resources, such as Web pages, data reports, notices that must be signed, etc.
- What do you currently pay for your Internet access? If it is not adequate, make a brief case that you are paying too much for unreliable and low quality services.

Most important is that we have support and *commitment* from as many of our supervisory unions as possible. This is crucial not only for K-12 schools but for Vermont communities as a whole. Please take the time to send a letter on your letterhead in support of this critical work. We need this letter from you no later than March 8<sup>th</sup>.

Thank you for your attention to this matter. If you have any questions, please contact Peter Drescher at (802) 828-5149 or Chris Hastings at (603) 488-0203.

Please paste and edit the following text on your Supervisory Union letterhead and return to the Vermont Department of Education.

<Current Date>

Armando Vilaseca, Commissioner  
Vermont Department of Education  
120 State Street  
Montpelier, VT 05620-2501

Dear Commissioner Vilaseca,

This letter is to express our support and commitment to the proposed high speed broadband network being planned for education, library, and government entities by the Vermont Telecommunications Authority. We are hopeful that the application being submitted to the Broadband Technology Opportunities Program is successful in assisting the state of Vermont in further developing robust broadband resources for schools and communities. Regardless of the outcome of this work, we are in a situation of increasing need for high quality, high speed broadband access and will continue to pursue all opportunities.

We further understand that there will be a process for schools to connect as the Vermont network is developed and we seek connectivity for our schools as this process moves forward. With this letter, we accomplish two objectives: to indicate the key benefits and positive impact the BTOP project will have in our community and to express our need and commitment as the project moves forward.

<These bullet points highlight some of the possible areas that you might expand upon and illustrate local examples: (Please delete these from the letter you send. They are intended to assist you in thinking about the areas you might expand upon.)

- 31 Supervisory Unions now use the Vermont Data Consortium. As this number increases and the services expand, schools will need increased through-put in their current Internet connections. Data is a powerful tool for our schools in creating learning environments meeting the needs of all students.
- Student use of real-time media via audio and video resources via the Internet continues to expand. For schools to continue to support independent learners and their access to these tools, access must be robust enough to support their use.
- Vermont schools are storing administrative information in the cloud. This is providing operational, financial and environmental benefits. Some examples include Point of Sale data from cafeterias and data from State and Federal reporting
- Vermont students and teachers are utilizing Web 2.0 tools for project-based learning which is having a truly positive impact, as evidenced by increased student engagement and improved student retention.
- Over 90 Vermont schools use and rely upon the Learning Network of Vermont (LNV), a statewide videoconferencing network that provides virtual field trips to all corners of the globe.

- The newly developed Vermont Virtual Learning Cooperative, (funded with Title IID/ARRA federal funds) which will provide high quality online courses for students K-12, will rely on adequate bandwidth for equity of student access to robust online learning tools and modules.
- A Longitudinal Data Grant was submitted on behalf of Vermont schools from the Vermont Department of Education in December 2009. Should Vermont receive this grant, it will be crucial to ensure 100% saturation.>

While the benefits of broadband access are many and it would be difficult to effectively describe all the possible aspects of increased bandwidth, we offer the following local examples that stand out in our district:

<Please edit the following section:

Here are some areas that indicate our need for broadband services as we move into the future.  
<Please include your own local examples as bullet points here:>

example: “Maple Lane School” at 123 East Tookum Rd. in Anytown, VT

Serves 230 K-8 students with a Free/Reduced lunch count of 45%

We are served by a DSL connection at 12megb upload and 6 megb download.

There are currently 130 computers that access the internet available to students. Of those 130 computers, it is a regular occurrence for over half of the machines to experience reduced connections to the internet especially between the hours of 11AM and 2PM. Routers and Internet devices regularly must be reset due to sporadic service intervals.

Quality of service is poor with daily sporadic service. (include statistics if possible)

Quantity of service is poor because teachers cannot use the following resources without system-wide “slow-downs”:

- Media rich video and audio resources
- Web 2.0 tools such as blogs, wikis, social bookmarking sites, etc.
- Learning Network of Vermont videoconferencing resources

<Any other specific examples that illustrate the difficulty experienced with inadequate broadband service.>

At Maple Lane School, we are also moving to more “cloud computing” services which make management of local resources much more cost effective. Currently, we are cloud computing:

- Point of sale software for cafeterias
- A math product being shared across schools in our SU
- Our web page is being outsourced to a managed entity
- We are considering outsourcing our email.

We could continue freeing up local resources if we had adequate bandwidth to move more services in this direction.

Please make the above examples as specific as possible.>

We understand that ongoing financial commitments from the district will be required for participation under such a network proposal, and that a primary objective of the effort is to make available greatly increased capacity and capabilities without significant increases in cost to schools.

What we ultimately seek is more adequate and reliable Internet access for all of our school sites. We commit to using our current level of funding on this project as it is developed to fruition and would consider paying slightly more for *significantly greater* bandwidth. Our expectation would be significantly improved reliability and bandwidth to allow our students and teachers access to the tremendous variety of online resources appropriate for 21<sup>st</sup> century teaching and learning.

Sincerely,

<Superintendent \_\_\_\_\_

Address of Supervisory Union>